



UTC Spotlight

University Transportation Centers Program

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USDOT-UTC Pedestrian/Bicycle Workshop

On September 29, 2014, the Department of Transportation hosted the first University Transportation Center (UTC) Workshop on Pedestrian and Bicycle Research. Approximately 35 participants from across USDOT and the UTCs participated in the intensive 3-hour session. Included were a poster session, focusing on the research being conducted at UTCs and within the Department, and subsequent roundtable discussion.



Participants listen to a presenter at the UTC Pedestrian/Bicycle Workshop.

Ellen Partridge, Chief Counsel, Office of the Assistant Secretary for Research and Technology (OST-R), served as the workshop moderator and provided opening remarks and

introductions. Barbara McCann, Director, Office of Safety, Energy, and Environment, Under Secretary for Policy (OST-P-30), provided participants with an update on the Secretary's bicycle and pedestrian safety initiative, which has become a signature program for the Department. The comprehensive initiative includes three elements: safer streets, safer communities, and safer policies.

To effectively address these elements, the workshop discussion focused on four comprehensive areas: networks and connectivity, data needs, tools to address bike/ped safety, and equity considerations/ladders of opportunity. USDOT modal representatives and UTC researchers discussed the critical criteria necessary for pedestrians and bicyclists with regard to connectivity, including how to define and measure networks, how to document "nodes" (the intersections between bike/ped paths and a road), how to include networks and connectivity in planning, consistency issues with regard to research data, and how best to assess improvements. The dialogue also included the need to engage state DOTs

within the process more (as many MPOs are already), and the issue of land use where rural networks will look significantly different than those in urban areas.

The area of data needs presented challenges such as how to accurately measure miles walked/biked in a way that is commensurate with vehicle-miles traveled (VMT). Doing this would provide context for crashes, injuries, and fatalities; enable researchers and practitioners to better evaluate the safety impacts of engineering and infrastructure; and estimate the need for bike/ped lanes or paths, among other things. Demographic and socioeconomic information is available via the Census, and the location of social services is available via many databases, but bike/ped infrastructure info is not as readily available. This makes it difficult to map bike/ped network needs and existing bike/ped infrastructure to determine where future bike/ped infrastructure is most needed to allow people to access jobs, schools, and social services. Discussion included the value of obtaining data from National Highway Traffic Safety Administration, the Centers for Disease Control, and the National Institutes of Health (the largest funder of bike/ped research), as well as from hospitals and the police to help refine accident data. An idea that received many nods of approval was to develop a national cooperative bike/ped program, similar to the National Cooperative Highway Research Program or National Cooperative Freight Research Program, or applying a pooled-fund program at a larger scale at the national level. Another innovative idea was using crowd



Barbara McCann, Director, Office of Safety, Energy and Environment (OST-P), and a UTC presenter discuss bike/ped research project.



UTC researchers and USDOT representatives discuss ongoing bike/ped research.

sourcing as a means of collecting data not captured by other means.

Researchers stressed the practical importance of data needs. One participant suggested that rather than talking about “data,”

we should talk about “decisions” and the practical reasons for evidence-based decision-making. Another pointed out that the data needs depend on the question that you are addressing.

In terms of tools available to transportation professionals to inform decisions and design, both researchers and USDOT representatives found that they are in general agreement about what is needed for communities to improve their bike/ped transportation networks. These elements include improved data to examine bike/ped travel patterns and safety, better mapping/inventorying of bike/ped transportation facilities, more detailed safety data, and developing tools that are easy to use (with a minimum of jargon) that reach key stakeholder audiences so network/safety improvements may be made in a data-driven and equitable manner. Some ongoing UTC research in this area includes projects on impaired pedestrians that measure how they are affected by various environmental factors, and better ways to measure crash pattern data to determine systemic screenings.

The Secretary has made ladders of opportunity/equity a priority for the Department in terms of policy development, including the areas of income, age, gender, and race. Considerations include how to remove barriers to efficient, reliable, and safe transportation; how to examine environmental justice issues; what research is needed to help researchers create ladders of opportunity; and how the transportation community can more

effectively examine demographics to bring about change. Discussion also included ways to obtain data that will help practitioners better target the pedestrian and bike needs of low-income communities, enabling users to safely reach public transportation. One state DOT-funded project in Florida, for example, uses social marketing (observations, surveys, and focus groups) to assist low income, zero-car residents to walk safely to and from work, school, and transit locations. The importance of social psychology or “safety consciousness” was also discussed, especially in terms of connecting emotional or attitudinal responses with age, gender, disabilities, etc., when making transportation decisions. One UTC has worked with the state DOT in its research on low-stress bicycling and network connectivity as it pertains to personal safety and risk, while another has used Census data to assist with determining where people are located in order to address data gaps.

The workshop resulted in a rich and multidimensional discussion that will serve as a platform for further collaboration and cooperation between the Department and researchers and practitioners.



Ellen Partridge, Chief Counsel (OST-R), and UTC researchers share information.



Dr. Pei-Sung Lin from the University of South Florida UTC makes a point during the workshop discussion.

This newsletter highlights some recent accomplishments and products from one University Transportation Center (UTC). The views presented are those of the authors and not necessarily the views of the Office of the Assistant Secretary for Research and Technology or the U.S. Department of Transportation, which administers the UTC program.

